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A. Relevance of the Above-identified Document

This document has relevance to claims 1, 2, 39 and 40 of the present application.

B. Translation of the Relevant Passages of the Document

[PRIOR ART]

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In the device shown in Figure 5, the respective RGB signals of the input color video signal are first inputted to a six colors division circuit 61.

As an example of the conventional six colors division circuit 61, the following explains the extraction circuit shown in Figure 8, that divides an R signal. First, the comparison circuit 81 compares the levels of an R-G signal and an R-B signal of the original signal, and the selector 82 selects the lower level signal. Further, the clipping circuit 83 removes a minus component from the selected signal. The resulting signal is outputted as an R' signal.

Accordingly, as shown in Figure 9, when the color video signal has RGB signals at a ratio of 0.8:1.0:0.2, the six colors division circuit 61 divides the signal in a

manner equal to the following formula.

$$0.8R+1.0G+0.2B=0.2(R+G+B)+0.6(R+G)+0.2G$$

where

(R+G+B): white,

(R+G): Ye',

G: G'

According to the formula, it is regarded that the video signal contains Ye' and G' at a ratio of 0.6:0.2. Then, color compensation original color signals R', G' and B' at a ratio of 0.0:0.2:0.0, and color compensation complementary color signals Cy', Ma' and Ye' at a ratio of 0.0:0.6:0.0 are outputted.

Similarly, when the color video signal has RGB signals at a ratio of 0.8:1.0:0.2, six colors division circuit 61 outputs a color compensation original color signal R' at a ratio of 0.4, and other color compensation signals at a ratio of 0, according to the following formula.

$$0.8R+0.4G+0.4B=0.4(R+G+B)+0.4R$$

Next, the color compensation original color signals R', G' and B' and the color compensation complementary color signals Cy', Ma' and Ye' thus outputted from the six colors division circuit 61 are supplied to the multiplication circuits 62 through 65, respectively, to be multiplied by predetermined compensation coefficients K1 through K12. Thereafter, the respective signals are

added/subtracted to/from the original RGB signals by the addition/subtraction circuits 66 through 74, and outputted as modified RGB signals through the predefined compensation.

Here, as one example, with reference to the Maxwell's dichromatic view shown in Figure 6, the following explains the purport of the foregoing calculation in which the Ye' signal is multiplied by the coefficient K1, and added to the R signal and subtracted from the G signal. In the calculation, the position of the Ye in the dichromatic view is moved to the direction denoted by the solid line (1) so that the hue of the Ye is changed in an amount of the coefficient K1.

Further, in the calculation in which of the Ye' signal is multiplied by the coefficient K2, and added to the R signal and to the G signal, the position of the Ye in Figure 8 is moved to the direction denoted by the broken line (2), so that the saturation of the Ye is changed in an amount of the coefficient K2.

In the same manner, the color compensation original color signals R', G' and B' and the color compensation complementary color signals Cy', Ma' may be adjusted in hue and saturation by being multiplied by predetermined compensation coefficients K3 through K12, and added/subtracted to/from the R and G signals. In this

way, the device of Figure 5 enables individual adjustment in hue and saturation of the respective colors R, G, B, Cy Ma and Ye, as shown in Table 1.

Table 1

COMPENSATED COLOR	SATURATION/HUE	METHOD
R	SATURATION	K1×R IS ADDED TO R
	HUE	K4×R IS ADDED TO R SUBTRACTED FROM G
G	SATURATION	K2×G IS ADDED TO G
	HUE	K5×G IS ADDED TO R SUBTRACTED FROM B
B	SATURATION	K3×B IS ADDED TO B
	HUE	K6×B IS ADDED TO G SUBTRACTED FROM R
Ye	SATURATION	K7×Ye IS ADDED TO R AND G
	HUE	K10×Ye IS ADDED TO R SUBTRACTED FROM G
Cy	SATURATION	K8×Cy IS ADDED TO G AND B
	HUE	K11×Cy IS ADDED TO G SUBTRACTED FROM B
Ma	SATURATION	K9×Ma IS ADDED TO B AND R
	HUE	K12×Ma IS ADDED TO B SUBTRACTED FROM R

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㊹発明の名称　カラー映像信号の色補正回路

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(57)【要約】
〔目的〕乗算器と加算器とに供給すべき信号をＲＧＢ間の色差信号の極性に応じて選択するようにして、乗算器と加算器の個数の増加を抑え小型化を図る。
〔構成〕レジスタ１８～２３には原色の彩度調整用及び色相調整用係数が格納され、レジスタ２４～２９には補色信号に対応した彩度調整用及び色相調整用係数が格納される。そしてレジスタ１８～２９に格納してある係数が例えば乗算回路１４，１５により乗算され、その結果と、反転回路３０の出力とがセレクタ１２に供給されると、セレクタ１２が、色判定回路５によるＲ色という判定結果で、乗算回路１４の出力を加算回路３３に切換え、入力映像信号のＲ信号に加算し、乗算回路１５の出力と反転回路３０の出力とを加算回路３４，３５に切換えて、入力映像信号のＢ信号とＧ信号に加算させる。このようにして８個の加減算回路と、４個の乗算回路を用いるだけで、６色独立した色補正が可能となり、小型化される。

【カラ－ 映像 信号 色補正 回路 乗算器 加算器 供給 信号 RGB 色差 信号 極性 選択 個数 増加 抑え 小型化 レジスタ 原色 彩度 調整 色相 調整 係数 格納 補色 信号 対応 乗算 回路 乗算 反転 回路 出力 選択器 色 判定 回路 色 判定 結果 加算 回路 切換 入力 映像 信号 R信号 加算 B信号 G信号 8個 加減算 回路 4個 6色 独立 色補正 可能】